User Manual

CubiCal - Demonstration Software

Purpose Built SOFTWARE

CubiCal™

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1. Introduction

1.1 Software

The CubiCal C8000 is a cassette device with an enclosed 4 metre (13ft) tape measure that allows measurements made to be sent to the attached hand held computer.

Purpose Built Software (in conjunction with CubiCal) have created this demonstration software package to assist in communicating (demonstrating) the functionality of the C8000 to interested users. The software contains most of the functional aspects used in the real world when capturing dimensional (LxWxH) and weigh scale data.

Installations and upgrade information may be found in this manual at section 4. Installation & Setup

An impressive feature of the software is the ability of the server to automatically check and download new versions of both the server and PDA software as they become available.

Additionally, the date and time of the PDA is automatically set to the same as the servers date and time every time a PDA uploads its data.

We find that most logistics organizations have specific business rules and processes that will need to be incorporated into the application (both on PDA and Desktop) before it is fully suitable for their use.

Purpose Built Software would be happy to support you in defining and implementing those changes.

For more information please contact:

Norman Bain
Technical Director
Purpose Built Software
norman.bain@purposebuilt.com.au
Int+ 61 2 9906 7300

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1.1. Hardware

There are several CipherLab PDA models that are compatible with the CubiCal C8000 Tape Cassette: These compatible models are:

- CipherLab CPT-8001 CCD (CradleComms to PC, CCD barcode scanner)
- CipherLab CPT-8001 Laser (CradleComms to PC, Laser barcode scanner)
- CipherLab CPT-8062 CCD (CradleComms to PC, CCD barcode scanner, inbuilt Bluetooth for Comms to WeighScales and PC)
- CipherLab CPT-8062 Laser (CradleComms to PC, Laser barcode scanner, inbuilt Bluetooth for Comms to WeighScales and PC)

See www.cubical.com and www.cipherlab.com

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2. Demonstration Program

This demonstration program has been created by Purpose Built Software to highlight how easy the C8000 is to use.

Please take the time to read up on the basic operation of the device and button usage.

2.1. General Usage

How to attach the PDA

The C8000 from CubiCal attaches to a CipherLab PDA as follows:

Insert the bottom of the PDA into the cassette as shown.

Pushing the PDA downward and inward, continue to move the PDA into the cassette.

Finish by firmly pushing the PDA down and left all the way into the cassette. The PDA becomes held in place by the top lip of the cassette.

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How to detach the PDA

The CubiCal C8000 detaches from a CipherLab PDA as follows:

Firmly grip the top of the PDA with the right hand and the cassette with the left.

With confidence, pull the PDA away from the cassette.

The PDA will release and can be removed.

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The PDA

Backlight

The unit selected has backlight capabilities. The backlight is turned on automatically at the start of each function. To conserve battery life it automatically turns off after a few seconds of no usage.

Main Buttons

[Enter] Buttons

Both blue buttons act as the [Enter] button. This is used to ok or confirm an action.

Scanning

The yellow button activates the barcode scanner. Barcode scanning is only enabled on screens where it makes sense that input may come via the scanner.

[ESC] Escape Button

The Escape button acts as a cancel or exit.

[BS] Backspace Button

The [BS] button is used in the normal backspace text edit mode to correct a mistake. Sometimes it is required to be pressed to provide confirmation that an action should

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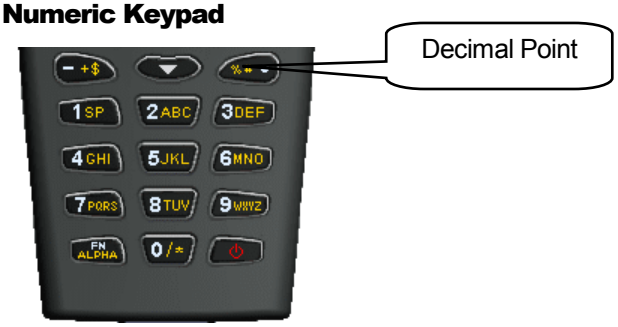
continue. (e.g. such as deleting the data); in these cases, screen prompts will assist the user.

Arrow Keys

Menus may be navigated by using the up and down arrow keys.

Numeric Keypad



Numbers may be entered as usual via the numeric keypad. Note, when required the decimal point is top right under the [BS] key.

Menus

Menu items may be selected by using the arrow keys to move up and down a menu and then pressing one of blue [Enter] buttons. The menu items can also be quickly selected by pressing the number keys.

2.2. Main Menu

Basic Workflow

The PDA will install with settings that will enable immediate use of the "Collect Data" and "Upload/Print" options.

The CubiCal tape cassette will be functional and the upload will be set to use the CipherLab cradle.

It is recommended that you use the PDA with these (default) settings to become familiar with the flows before making settings changes to use advanced options like "upload via Bluetooth" and "get data from Bluetooth weigh scale".

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2.3. Collect Data

From the main menu, highlight “Collect Data” and press the [Enter] key or press “1” on the numeric keypad.

Scan Barcode

You will be prompted to scan a barcode. This is the barcode of the Airway Bill or Consignment Note.

There are sample barcodes at Section 5. Sample Barcodes of this User Manual.

Point the PDA at the barcode and press the yellow button.

The scanned barcode is displayed for a few seconds before the software moves on to the next screen.

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Enter Weight

The weight can be entered manually or obtained via wireless Bluetooth communications from appropriately equipped scales.

The default is zero and the user can simply press [Enter] where weight is not required.

If Bluetooth has been selected, then when in proximity of the scales, the PDA will communicate with the scales and the weight is automatically displayed. The software will continue to ask the scale for the current weight every half second up till an [Enter] key is pressed.

For this demonstration program the user may manually enter the weight even if capture via a Bluetooth enabled scale is active.

When the correct weight has been entered, press the [Enter] key.

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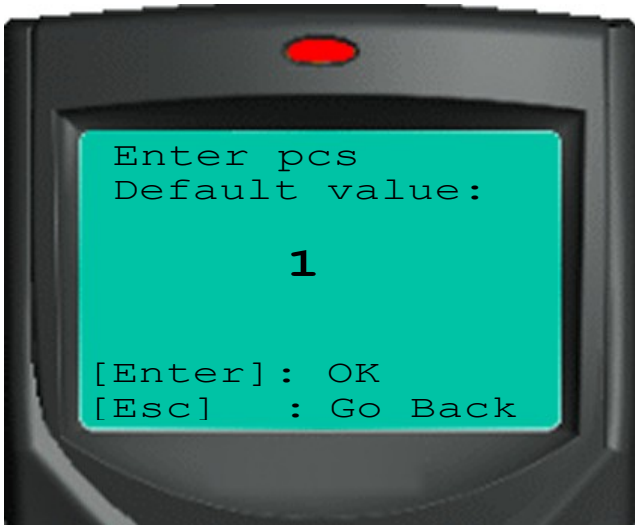
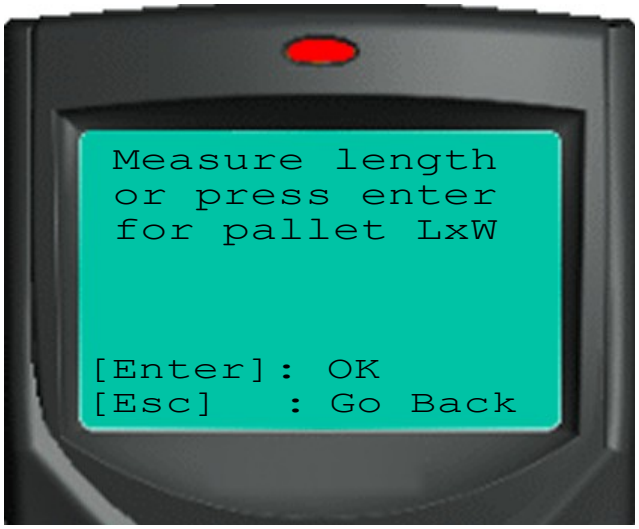
Enter Quantity

This is the number of identical pieces (pcs) that are being measured. Only one piece is measured to obtain the dimensions.



To accept the default value of 1, simply press either [Enter] key, else enter the number of pieces being measured on the numeric keypad and press either [Enter] key.

Enter Dimensions



The dimensions may now be entered. These values can come from:

1. Use of the CubiCal tape cassette;
2. Manual entry via use of the numeric keypad
3. Pressing the [Enter] key to accept the LxW values of a pallet

1. Enter Dimensions using CubiCal tape cassette

To obtain the dimensions using the C8000 tape cassette, pull the tape out of the cassette.

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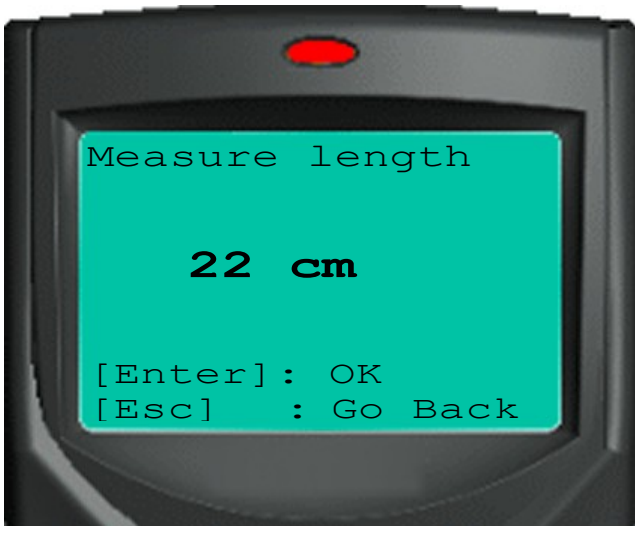
The length will be displayed on the screen and will be automatically updated as the tape is moved in and out of the cassette



With the tape extended measuring the length, press one of the blue [Enter] buttons to accept the reading.

Repeat for the width and height.

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2. Enter Dimensions Manually

For this demonstration program, the dimensions can also be manually entered using the numeric keypad.

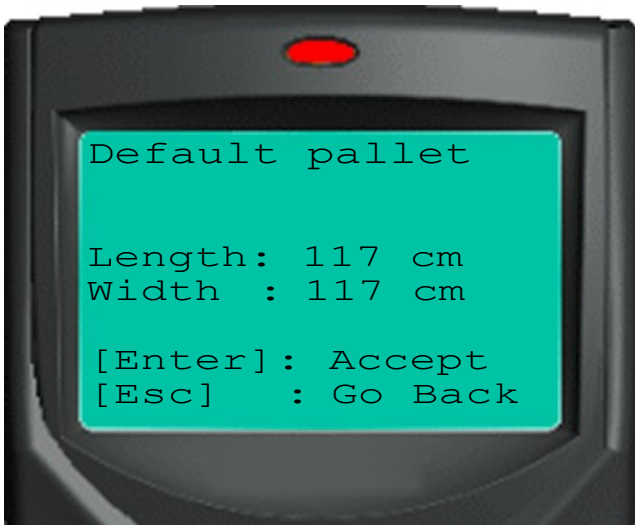
Press one of the blue [Enter] buttons to accept the reading.

Repeat for the width and height.

3. Enter Dimensions using default pallet LxW

To use the default pallet settings simply press the [Enter] key on the first screen displayed.

This will move to the screen shown below to ask for confirmation of the LxW.



If the values displayed are correct press [Enter] to accept them and move to the "Measure Height" screen.

Enter height using the CubiCal C8000 or manually enter the value and press [Enter].

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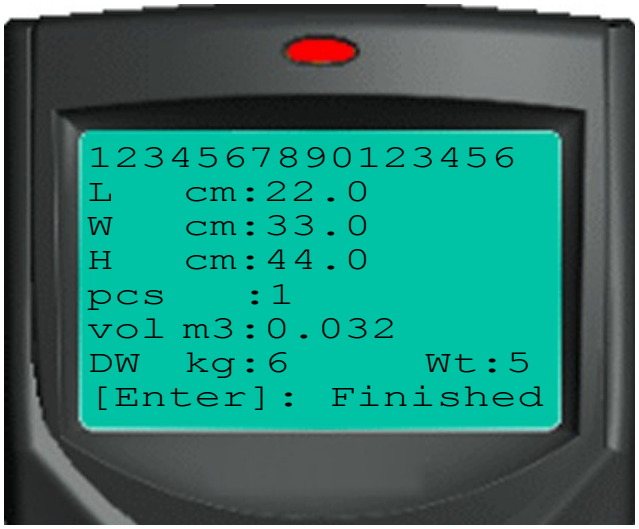
Summary Screen

When all measurements have been obtained, the summary screen is displayed.



Press one of the blue [Enter] keys to confirm.

2.4. Calculations

Volume Calculation

During the collection phase the volume is calculated as:

(Length/100) x (Width/100) x (Height/100) x quantity = Volume m3

For example if we measured Quantity=1, Length=22cm, Width=33cm and Height=44cm

(22/100) x (33/100) x (44/100) x 1 = 0.032 m^3

By configuring the software using the settings options the imperial equivalent is also available.

Dimensional Weight (DW) Calculation

Sometimes incorrectly called Volumetric Weight. The dimensional weight is calculated by taking the volume obtained by the calculation above and multiplying it by a user configurable factor.

For example if we measured pcs=1, Length=22cm, Width=33cm and Height=44cm

(22/100) x (33/100) x (44/100) x 1 = Volume 0.032 m^3

0.032 x 167 = 5.344 = rounded up = DW Weight 6kg

The default settings are shown below and may be changed from the settings menu, option 1 DW “Set DW factor”.

Metric: 167 (this may be set to a value between 120 and 500)

Imperial: 10.0 (this may be set to a value between 8.9 and 15.0)

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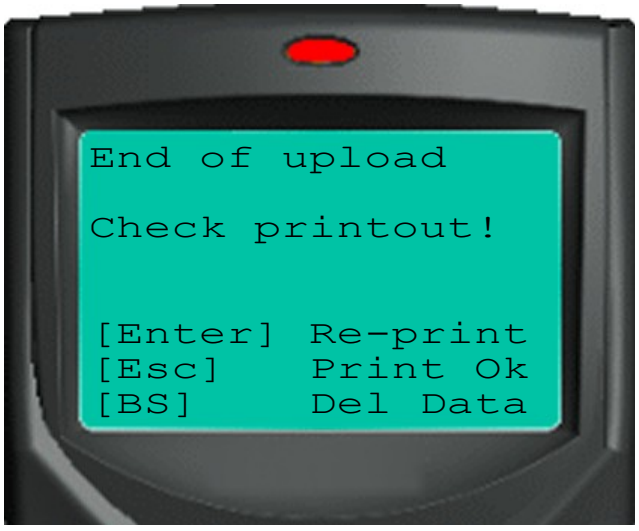
2.5. Upload and Print Data

Uploading is the function of taking the data from the device and sending it to a PC for printing or processing.

The data can be uploaded via the cradle or Bluetooth communications based upon the setting option in “Upload mode”.

If the cradle is being used, please place the device in the cradle and from the main menu, highlight “Upload / Print” and press the [Enter] key or press “2” on the numeric keypad.

Once complete it will report



To resend the data to the server, press the [Enter] key.

If the send was successful and you don’t wish to remove the data just yet, press the [Esc] key.

If the send was successful, the normal action would be to press the [BS] key and remove the data from the device. This needs to be confirmed as shown below.

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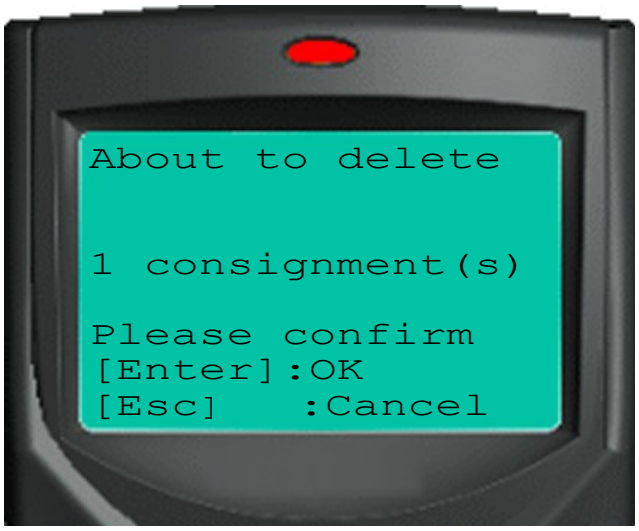

Press [BS] again to remove the data and return to the main menu.

2.6. Upload Result

The data sent to the printer selected in the list box on the CubiCal Server will look like:

ID	WEIGHT (kgs)	PCS	L (cm)	W (cm)	H (cm)	vol: (m3)
6934808800439	1256	1	12	16	16	0.003
6934808800439	463	1	12	20	21	0.005

Data sent to the server will be saved to file in Comma Separated Value (CSV) form if the Server checkbox entry for "Write PDA data to file" is checked.

2.6.1. File Name & Location

The files are saved into the same location as the server executable and named:

CubiCal_YYYY_MMM_DD.csv or

CubiCal_YYYY_MMM_DD.csv where

YYYY is the year as 4 digits. e.g. 2009

MMM is the name of the month. e.g “Feb”

DD is day of the month as two digits. e.g. “08”

We appreciate that this demonstration program only creates a single file for each day and that the file content does NOT aggregate.

Contact Purpose Built Software to arrange program modifications to suit the file name, location and content suitable to the business rules of the end user organisation.

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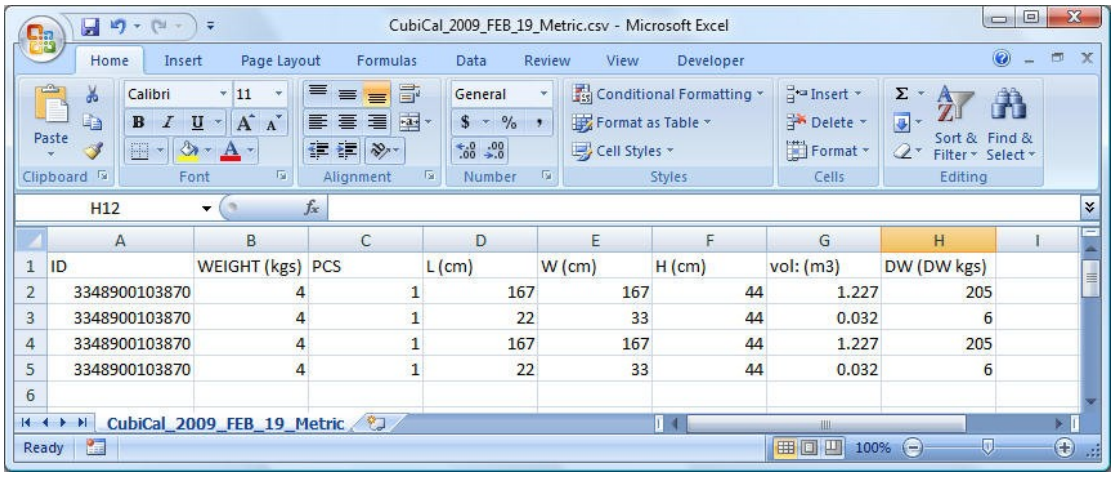
2.6.2. File Layout

The file layout is a standard CSV file with header as shown below.

```
"ID","WEIGHT (kgs)","PCS","L (cm)","W (cm)","H (cm)","vol: (m3)","DW (DW kgs)"
"3348900103870","4","1","167","167","44","1.227","205.000"
"3348900103870","4","1","22","33","44","0.032","6.000"
"3348900103870","4","1","167","167","44","1.227","205.000"
"3348900103870","4","1","22","33","44","0.032","6.000"
```

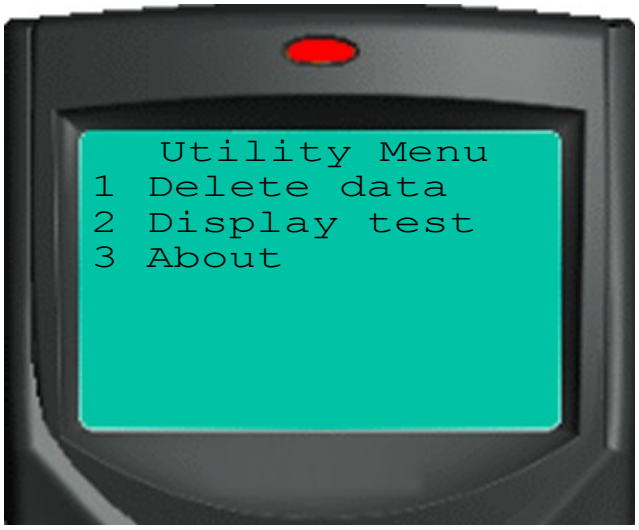
This file can be opened in a tool such as Microsoft Excel or sent to and external system for processing.



	A	B	C	D	E	F	G	H	I
1	ID	WEIGHT (kgs)	PCS	L (cm)	W (cm)	H (cm)	vol: (m3)	DW (DW kgs)	
2	3348900103870	4	1	167	167	44	1.227	205	
3	3348900103870	4	1	22	33	44	0.032	6	
4	3348900103870	4	1	167	167	44	1.227	205	
5	3348900103870	4	1	22	33	44	0.032	6	
6									

2.7. Utilities

The utilities menu allows various functions to be performed.



Press 1 to delete any data on the device.

Press 2 to run a test which tests each pixel on the display.

Press 3 to display the about screen which lists various version numbers and copyright.

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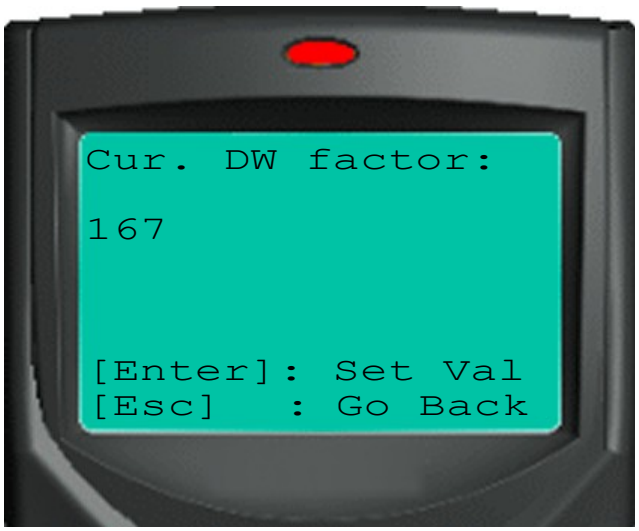
2.8. Settings

The settings menu allows access to the various user configurable settings.

Set Dimensional Weight factor

The Dimensional Weight (DW) factor is used within the calculation of Dimensional Weight. This is explained in the section titled “Calculations”.

This screen allows the user to select the most appropriate factor for their particular usage.



On entry to this screen the current factor is displayed. To change press either [Enter] button to change this value.

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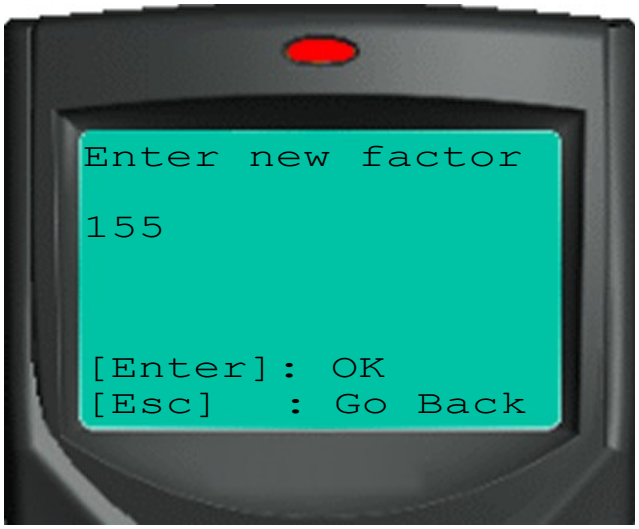
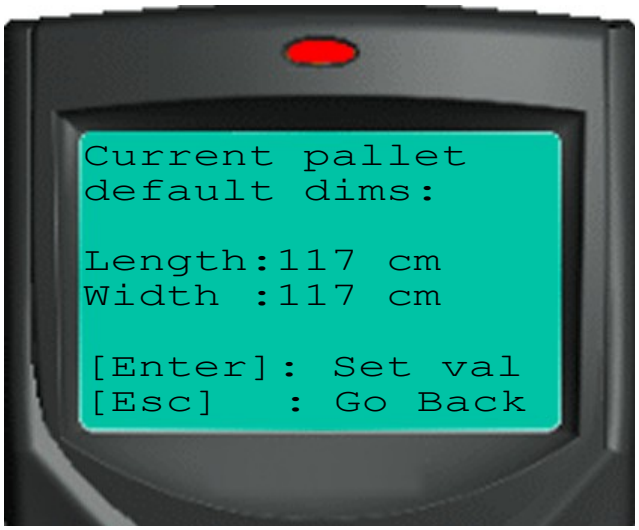


Type in a new factor remembering that the decimal point is the key above the [3] key. The value must be between 120 and 500.

When the new value has been correctly entered, press either [Enter] key or [Esc] to abort.

Default dimensions

The default dimensions are used when a special barcode is scanned or the default is accepted on the on the enter length screen.



Press [Enter] to change the value.

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Use either the tape cassette to measure the length of a default pallet or manually enter the length. Press [Enter].

Repeat the same for the pallet width.

Metric / Imperial

The device can operate in either metric or imperial units of measurements. This can be changed from the settings menu.

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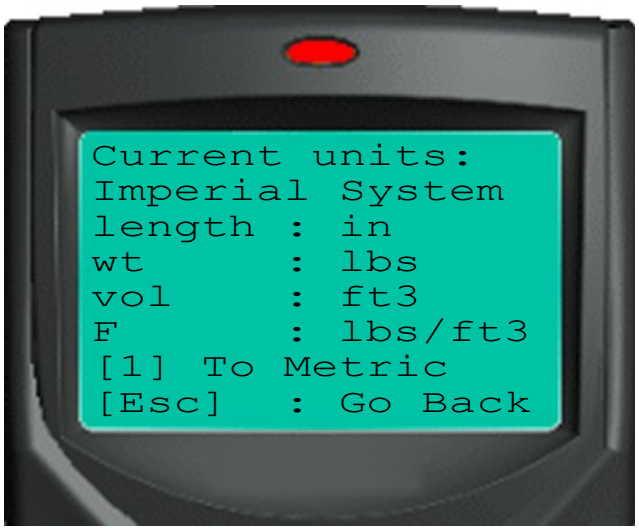
To switch press [2] on the numeric keypad to change to Imperial.



To switch press [1] on the numeric keypad to change to Metric.

Press [Esc] once you have selected the correct units of measurement.

Tape Cassette Accuracy

The measurement accuracy allows the user to set the accuracy of the tape cassette.

When in metric mode the accuracy is in cm steps. When in imperial mode the tape cassette can be set to report either whole or half inch steps.

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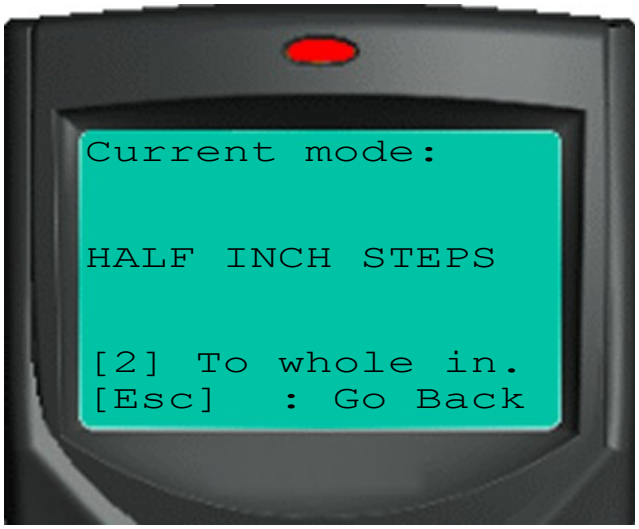
When in Imperial mode:



Press either [1] or [2] to switch between the two options. Press [Esc] when complete.

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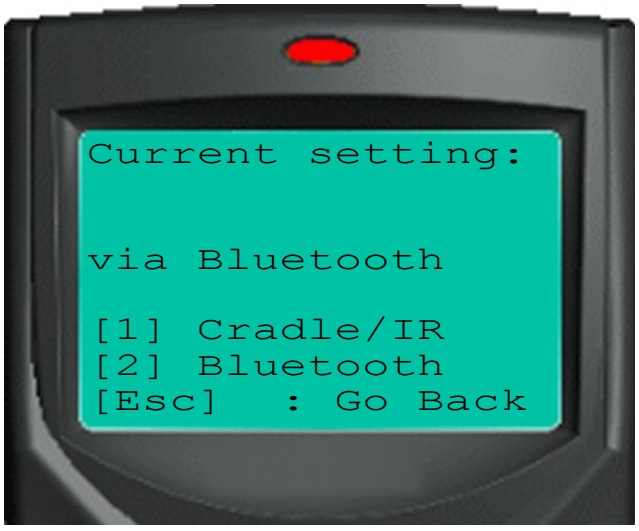
Upload Mode

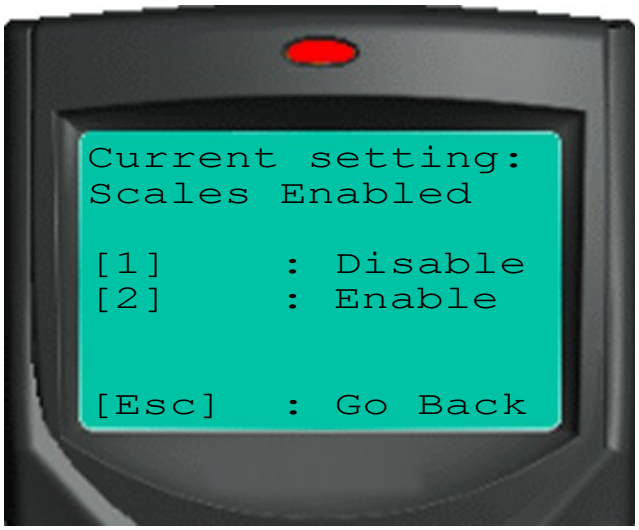
The upload mode may be set to either Bluetooth or Cradle.



Press either [1] or [2] on the numeric keypad to select the appropriate transmission mode.

Scales

During the collection process the weight may be obtained from suitably equipped weigh equipment using Bluetooth. This screen allows the scales to be enabled or disabled.



Press either [1] or [2] on the numeric keypad to select the appropriate mode.

2.9. Bluetooth Communications

The Bluetooth menu allows the user to identify and set Bluetooth enabled devices..

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Find Scales

Use this option to locate and pair with a suitably enabled Bluetooth weigh scale. After searching for Bluetooth devices in range, the scales should be displayed. Select the corresponding number to pair with that device.

Find Server

Use this option to locate and pair with the server. After searching for Bluetooth devices in range the server computer name should be displayed. Select the corresponding number to pair with the server and enter the pin if prompted.

This is further explained in the section titled “Bluetooth Pairing”.

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3. Server

A server has been created that runs on a desktop and will accept scanned items from a device and either save the contents in a file as Comma Separated Values (CSV) or send the contents to a printer or do both.

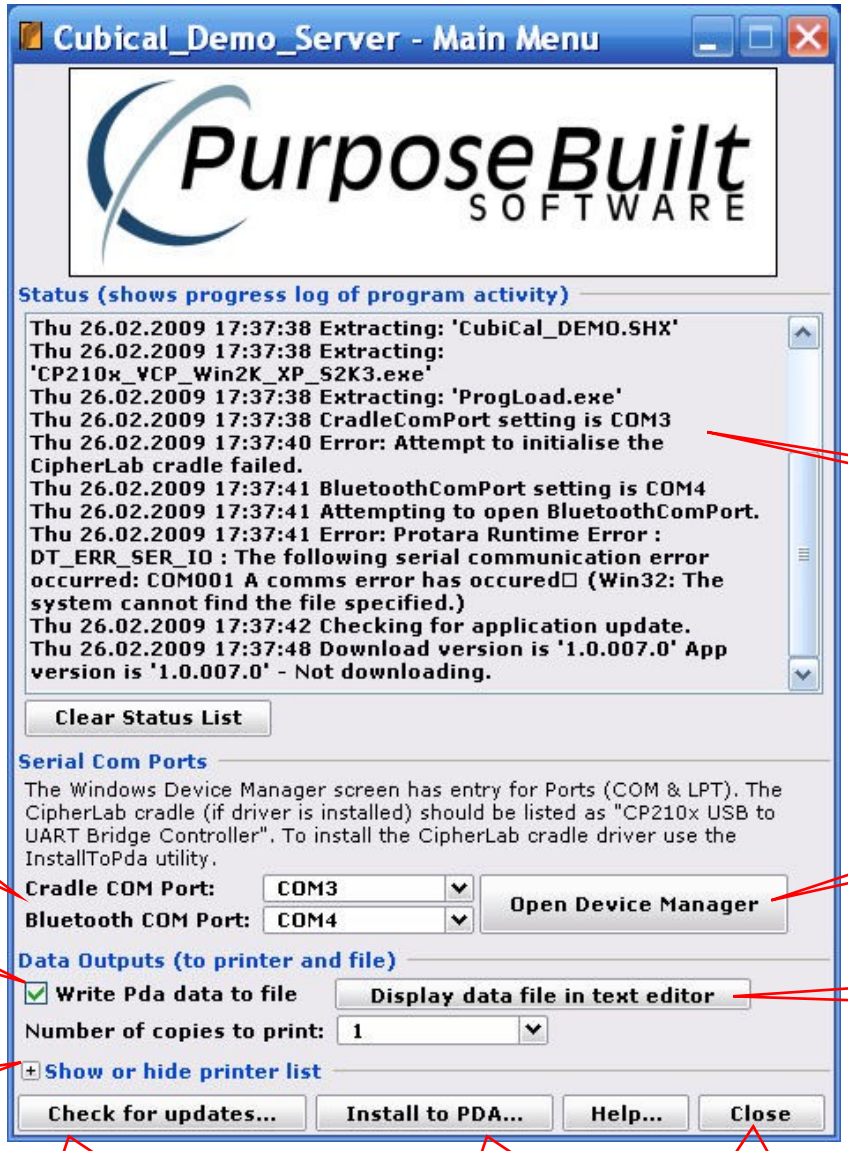
Status List

The status list displays a history of the events recorded to the server log file. This includes changes made by the user, uploads from a device, etc.

Communications

The server can communicate with a device via both a cradle and Bluetooth.

This requires the selection of the appropriate COM: ports.


Cubical_Demo_Server - Main Menu
PurposeBuilt SOFTWARE
Status (shows progress log of program activity)
Thu 26.02.2009 17:37:38 Extracting: 'CubiCal_DEMO.SHX'
Thu 26.02.2009 17:37:38 Extracting: 'CP210x_VCP_Win2K_XP_S2K3.exe'
Thu 26.02.2009 17:37:38 Extracting: 'ProgLoad.exe'
Thu 26.02.2009 17:37:38 CradleComPort setting is COM3
Thu 26.02.2009 17:37:40 Error: Attempt to initialise the CipherLab cradle failed.
Thu 26.02.2009 17:37:41 BluetoothComPort setting is COM4
Thu 26.02.2009 17:37:41 Attempting to open BluetoothComPort.
Thu 26.02.2009 17:37:41 Error: Protara Runtime Error : DT_ERR_SER_IO : The following serial communication error occurred: COM001 A comms error has occured□ (Win32: The system cannot find the file specified.)
Thu 26.02.2009 17:37:42 Checking for application update.
Thu 26.02.2009 17:37:48 Download version is '1.0.007.0' App version is '1.0.007.0' - Not downloading.
Clear Status List
Serial Com Ports
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller". To install the CipherLab cradle driver use the InstallToPda utility.
Cradle COM Port: COM3
Bluetooth COM Port: COM4
Open Device Manager
Data Outputs (to printer and file)
Write Pda data to file
Display data file in text editor
Number of copies to print: 1
Show or hide printer list
Check for updates...
Install to PDA...
Help...
Close
Status Information
COM Port Settings
Opens Device Manager
CSV File Control
Displays last Upload
Printer List Access
Checks for Software Updates
Installs software to PDA
Closes the Server

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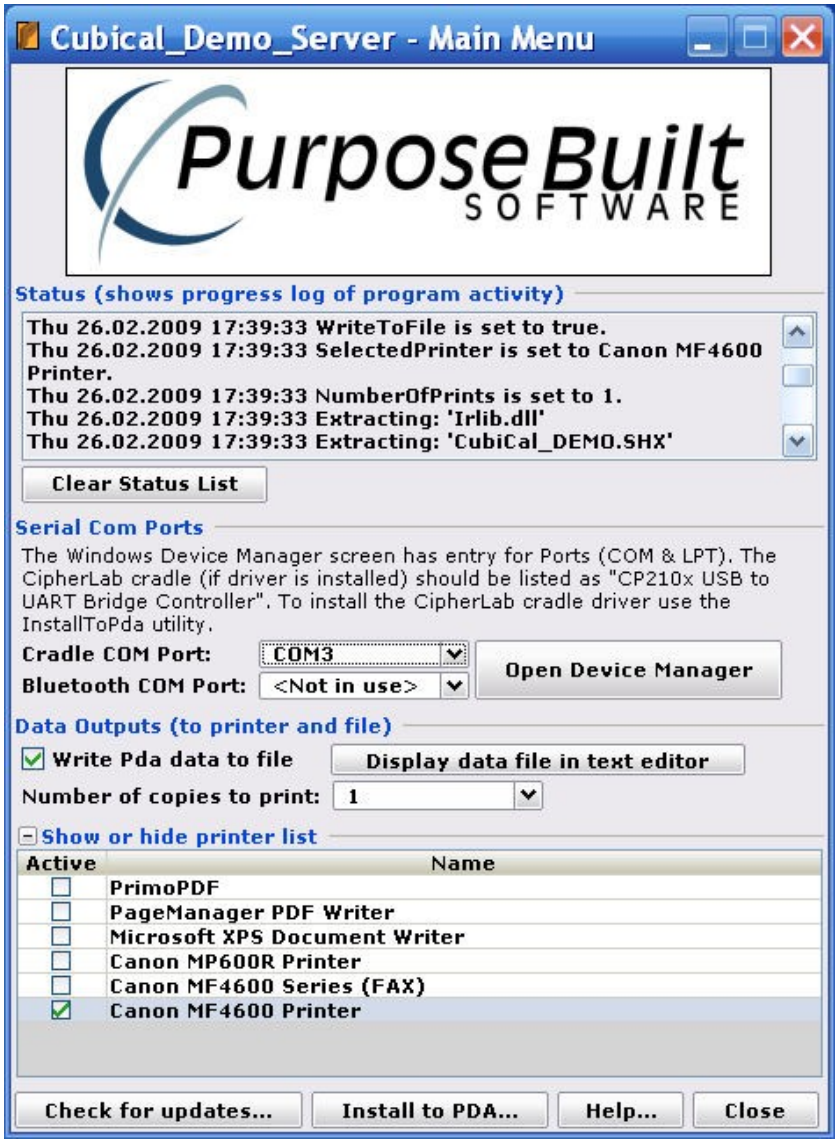
Printing

A printout of the items scanned can be obtained when a device is connected.


Cubical_Demo_Server - Main Menu
PurposeBuilt SOFTWARE
Status (shows progress log of program activity)
Thu 26.02.2009 17:39:33 WriteToFile is set to true.
Thu 26.02.2009 17:39:33 SelectedPrinter is set to Canon MF4600 Printer.
Thu 26.02.2009 17:39:33 NumberOfPrints is set to 1.
Thu 26.02.2009 17:39:33 Extracting: 'Irlib.dll'
Thu 26.02.2009 17:39:33 Extracting: 'CubiCal_DEMO.SHX'
Clear Status List
Serial Com Ports
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller". To install the CipherLab cradle driver use the InstallToPda utility.
Cradle COM Port: COM3
Bluetooth COM Port: <Not in use>
Open Device Manager
Data Outputs (to printer and file)
Write Pda data to file
Display data file in text editor
Number of copies to print: 1
Show or hide printer list
Active
Name
PrimoPDF
PageManager PDF Writer
Microsoft XPS Document Writer
Canon MP600R Printer
Canon MF4600 Series (FAX)
Canon MF4600 Printer
Check for updates...
Install to PDA...
Help...
Close

The print will be sent to the printer selected in the list box. To make the printer list box visible please click on the [+] Show or hide printer list

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4. Installation & Setup

The software is delivered as a single windows executable named Cubical_Demo_Setup.exe.

This may be downloaded at anytime from the website at

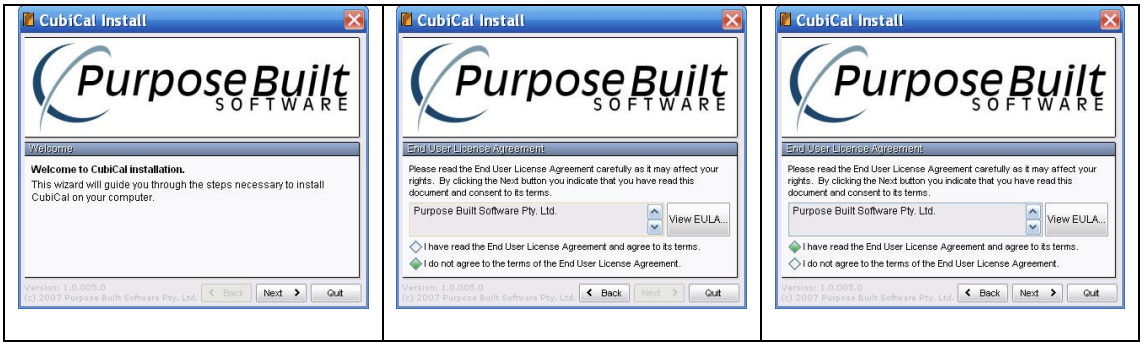
http://downloads.purposebuilt.com.au/CubiCal/CubiCal_Demo_Setup.exe

4.1. Install Desktop based CubiCal Server

Running the Cubical_Demo_Setup.exe will display the initial welcome screen and guide you through the installation process.

Installation

Review and agree to the licence agreement and follow the prompts. At the final step click [Finish] and the server will be started.


CubiCal Install
PurposeBuilt
SOFTWARE
Welcome
Welcome to CubiCal installation.
This wizard will guide you through the steps necessary to install CubiCal on your computer.
End User License Agreement
Please read the End User License Agreement carefully as it may affect your rights. By clicking the Next button you indicate that you have read this document and consent to its terms.
Purpose Built Software Pty. Ltd.
View EULA...
I have read the End User License Agreement and agree to its terms.
I do not agree to the terms of the End User License Agreement.
Back
Next
Quit

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All the CubiCal Server to start or click on the desktop icon to launch the Cubical Server.

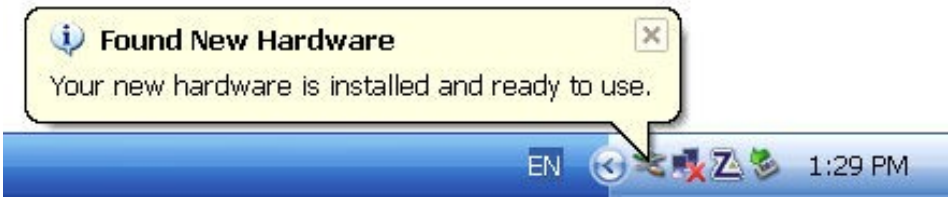
4.2. Install the USB Cradle

To install the cradle simply unpack the cradle and connect it to a power source.

Next plug the cradle into an available USB port on the PC.

Automatic Install

On most computers, the PC should report that it has detected the cradle and automatically install the appropriate drivers to map the USB port to a serial port and report that it is ready for use as shown below.



Manual Install

If the cradle drivers do not install automatically, start the CubiCal Server software and click the [Install to PDA…] button.

The Server will display the “CubiCal Pda Application Installation Guide” screen, Follow Step 1. Use the [Install CipherLab cradle driver] button and follow the instructions given.

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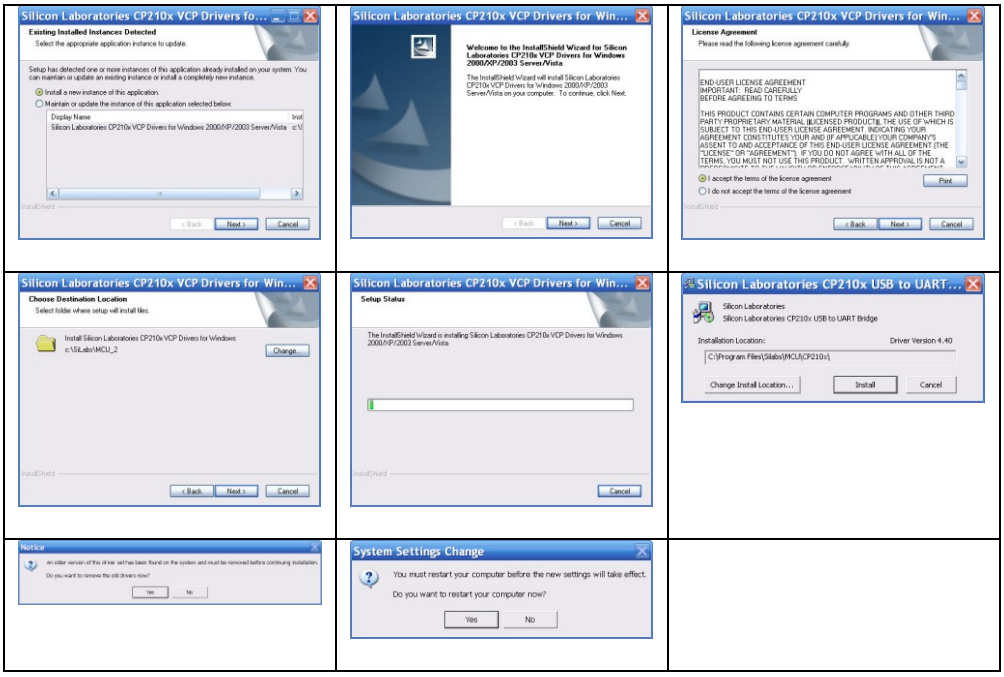
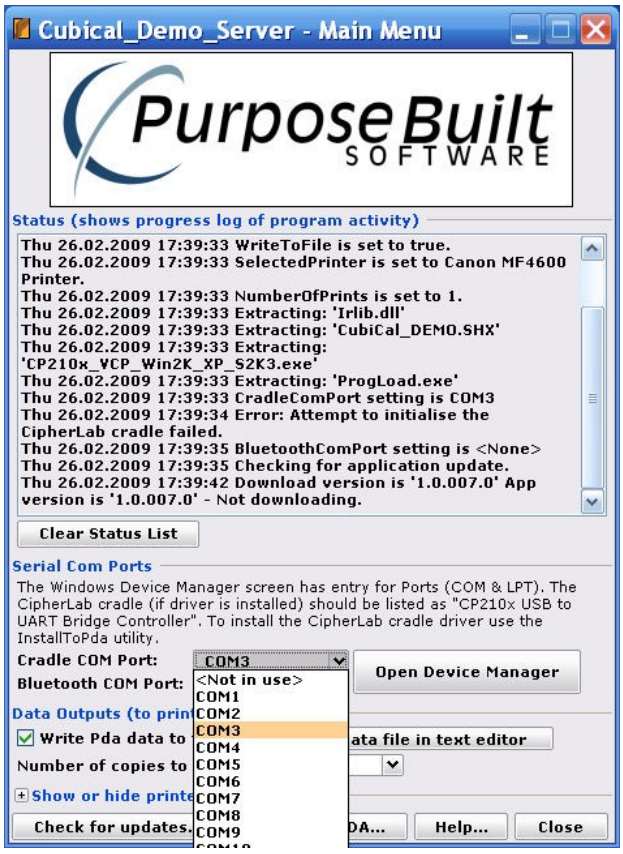

Silicon Laboratories CP210x VCP Drivers fo...
Existing Installed Instances Detected
Silicon Laboratories CP210x VCP Drivers for Win...
Welcome to the InstallShield Wizard for Silicon Laboratories CP210x VCP Drivers for Windows 2000/XP/2003 Server/Vista
Silicon Laboratories CP210x VCP Drivers for Win...
License Agreement
Silicon Laboratories CP210x VCP Drivers for Win...
Choose Destination Location
Silicon Laboratories CP210x VCP Drivers for Win...
Setup Status
Silicon Laboratories CP210x USB to UART...
Installation Location:
Notice
System Settings Change
You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Once complete and the computer restarted (if necessary) a device should appear as a new COM port in the device manager.

4.3. CubiCal Server Com Port settings

Use the Windows Device Manager to identify which serial port the cradle has been mapped to. As shown by the highlighted device in the screenshot below.


Cubical_Demo_Server - Main Menu
PurposeBuilt SOFTWARE
Status (shows progress log of program activity)
Thu 26.02.2009 17:39:33 WriteToFile is set to true.
Thu 26.02.2009 17:39:33 SelectedPrinter is set to Canon MF4600 Printer.
Thu 26.02.2009 17:39:33 NumberOfPrints is set to 1.
Thu 26.02.2009 17:39:33 Extracting: 'Irlib.dll'
Thu 26.02.2009 17:39:33 Extracting: 'CubiCal_DEMO.SHX'
Thu 26.02.2009 17:39:33 Extracting: 'CP210x_VCP_Win2K_XP_S2K3.exe'
Thu 26.02.2009 17:39:33 Extracting: 'ProgLoad.exe'
Thu 26.02.2009 17:39:33 CradleComPort setting is COM3
Thu 26.02.2009 17:39:34 Error: Attempt to initialise the CipherLab cradle failed.
Thu 26.02.2009 17:39:35 BluetoothComPort setting is <None>
Thu 26.02.2009 17:39:35 Checking for application update.
Thu 26.02.2009 17:39:42 Download version is '1.0.007.0' App version is '1.0.007.0' - Not downloading.
Clear Status List
Serial Com Ports
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller". To install the CipherLab cradle driver use the InstallToPda utility.
Cradle COM Port:
COM3
Bluetooth COM Port:
<Not in use>
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
Open Device Manager
Data Outputs (to prin
Write Pda data to
ata file in text editor
Number of copies to
Show or hide printe
Check for updates...
DA...
Help...
Close

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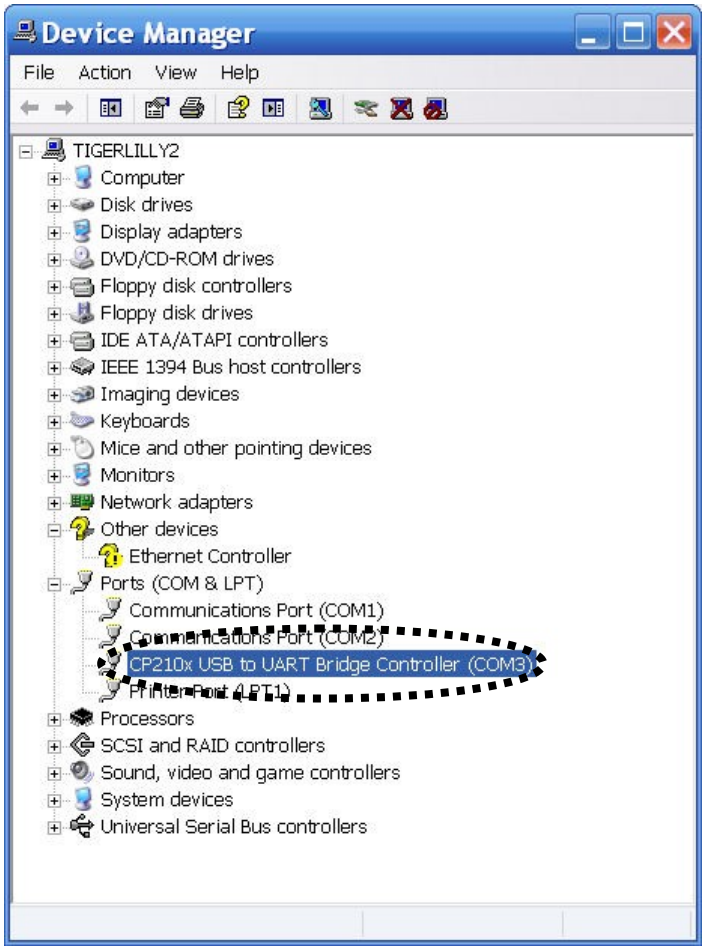
The Windows Device Manager may be displayed via the Control Panel, System, Hardware, [Device Manager] button or using the [Device Manager] button on the Server Window.



On the server, set the cradle COM port to the one shown in the device manager.

4.4. Installing application to PDA

In order to load the application onto the PDA, a cradle is required.

With the cradle properly configured, from the main server screen click “Install to PDA…”.

Note: the cradle MUST be attached to mains power to install the PDA application.

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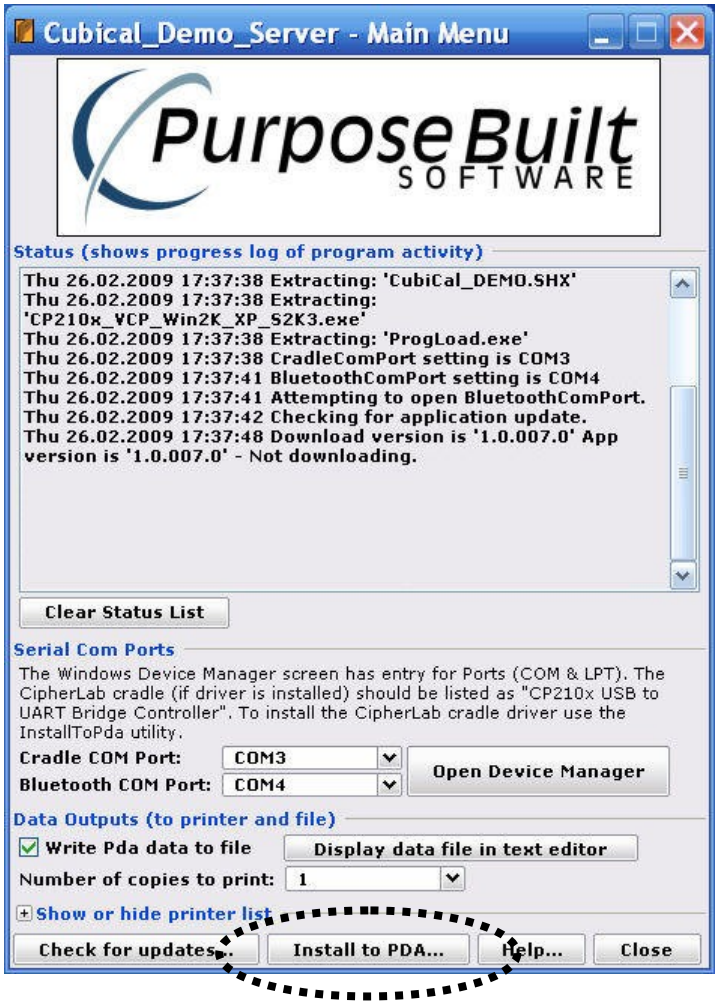
Cubical_Demo_Server - Main Menu
Purpose Built SOFTWARE
Status (shows progress log of program activity)
Thu 26.02.2009 17:37:38 Extracting: 'CubiCal_DEMO.SHX'
Thu 26.02.2009 17:37:38 Extracting:
'CP210x_VCP_Win2K_XP_S2K3.exe'
Thu 26.02.2009 17:37:38 Extracting: 'ProgLoad.exe'
Thu 26.02.2009 17:37:38 CradleComPort setting is COM3
Thu 26.02.2009 17:37:41 BluetoothComPort setting is COM4
Thu 26.02.2009 17:37:41 Attempting to open BluetoothComPort.
Thu 26.02.2009 17:37:42 Checking for application update.
Thu 26.02.2009 17:37:48 Download version is '1.0.007.0' App
version is '1.0.007.0' - Not downloading.
Clear Status List
Serial Com Ports
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller". To install the CipherLab cradle driver use the InstallToPda utility.
Cradle COM Port: COM3
Bluetooth COM Port: COM4
Open Device Manager
Data Outputs (to printer and file)
Write Pda data to file
Display data file in text editor
Number of copies to print: 1
Show or hide printer list
Check for updates...
Install to PDA...
Help...
Close

This will display the following screen which will step you through procedure.

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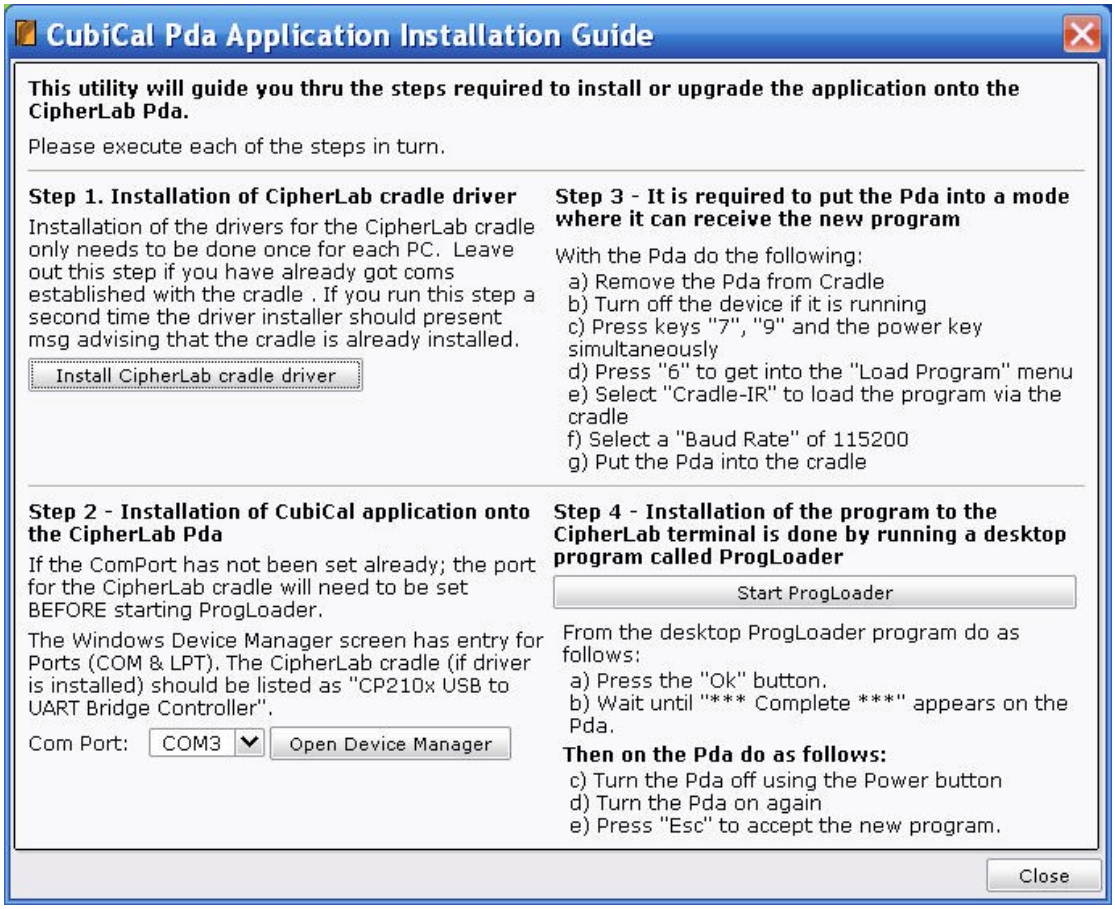
CubiCal Pda Application Installation Guide
This utility will guide you thru the steps required to install or upgrade the application onto the CipherLab Pda.
Please execute each of the steps in turn.
Step 1. Installation of CipherLab cradle driver
Installation of the drivers for the CipherLab cradle only needs to be done once for each PC. Leave out this step if you have already got coms established with the cradle . If you run this step a second time the driver installer should present msg advising that the cradle is already installed.
Install CipherLab cradle driver
Step 3 - It is required to put the Pda into a mode where it can receive the new program
With the Pda do the following:
a) Remove the Pda from Cradle
b) Turn off the device if it is running
c) Press keys "7", "9" and the power key simultaneously
d) Press "6" to get into the "Load Program" menu
e) Select "Cradle-IR" to load the program via the cradle
f) Select a "Baud Rate" of 115200
g) Put the Pda into the cradle
Step 2 - Installation of CubiCal application onto the CipherLab Pda
If the ComPort has not been set already; the port for the CipherLab cradle will need to be set BEFORE starting ProgLoader.
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller".
Com Port:
COM3
Open Device Manager
Step 4 - Installation of the program to the CipherLab terminal is done by running a desktop program called ProgLoader
Start ProgLoader
From the desktop ProgLoader program do as follows:
a) Press the "Ok" button.
b) Wait until "*** Complete ***" appears on the Pda.
Then on the Pda do as follows:
c) Turn the Pda off using the Power button
d) Turn the Pda on again
e) Press "Esc" to accept the new program.
Close

Assuming a properly configured cradle. starting at Step 3. Follow the instructions and put the PDA into a state where it can receive the new program.

Next, Step 4. Click the [Start ProgLoader] button and follow the instructions.

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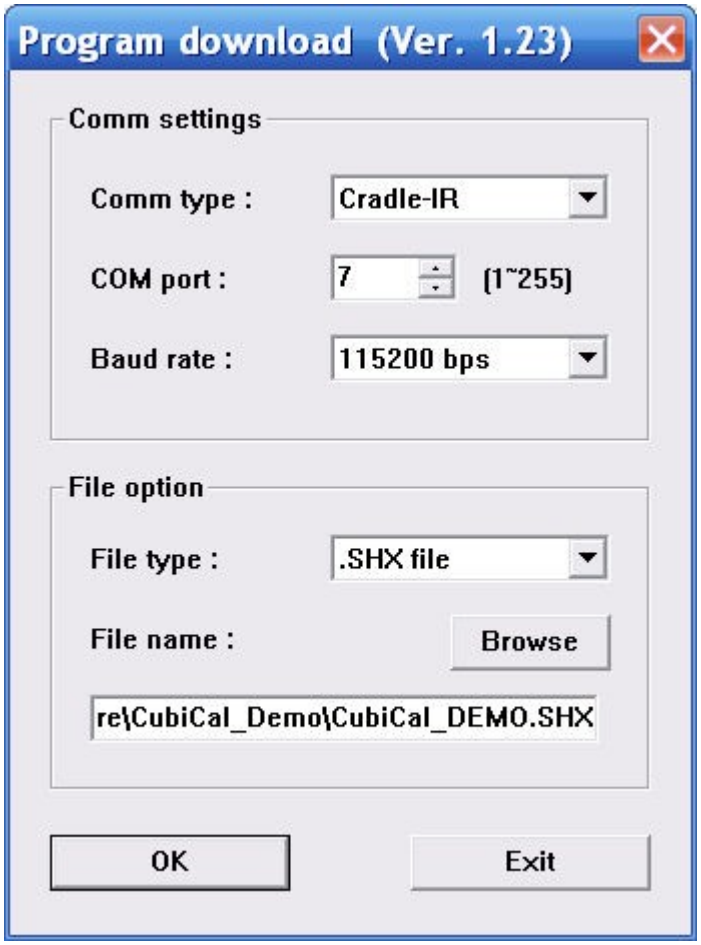

You need to follow the instructions shown on the screen exactly, else the program will not load.

At Step 4 after the [OK] button is pressed the server will report “Downloading…” and when complete “Downloaded successfully!” as shown below.

The device will report “*** Complete ***”. After powering the device off then back on, the new application will be loaded.

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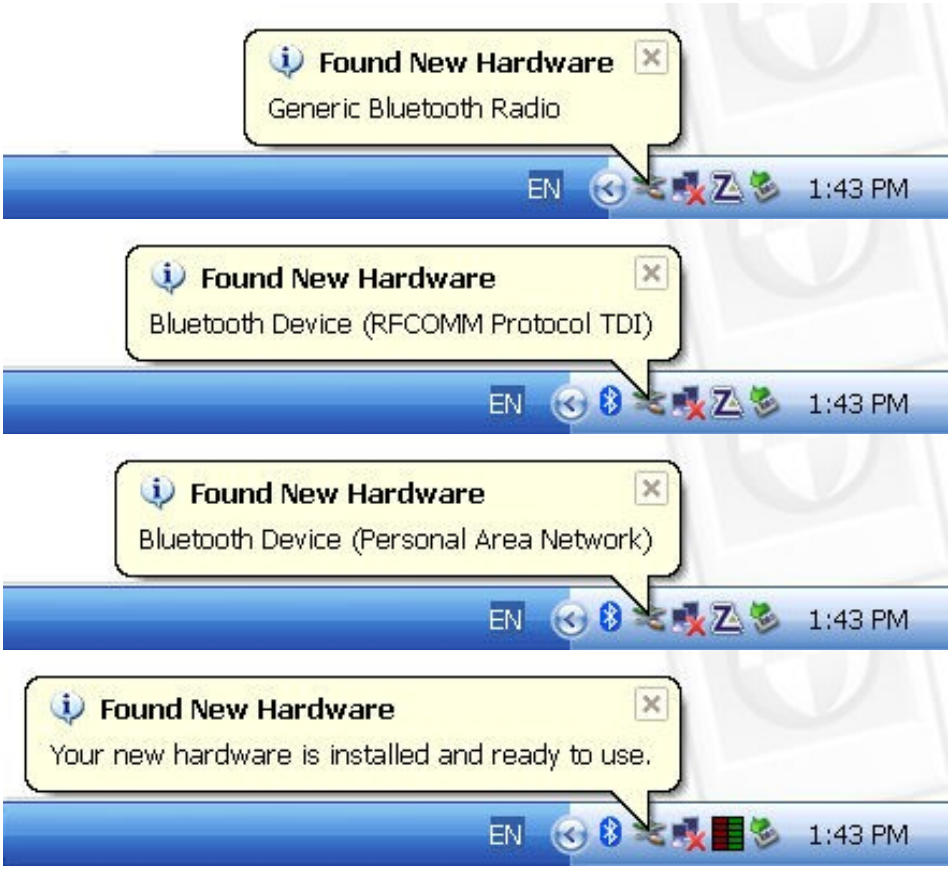
4.5. Installing Bluetooth Drivers

If the CipherLab PDA has Bluetooth capability and the PC also has Bluetooth capability then uploading data from the PDA to the PC can be performed using Bluetooth. Configuring for Bluetooth does not disable the cradle upload functionality.

In some environments is necessary to install 3rd party hardware and software to allow Bluetooth communications, in other environments, particularly notebooks Bluetooth will be built in.

The example below is the installation of a third party USB Bluetooth dongle that uses the standard Microsoft drivers under Windows XP. After plugging the device in allow the drivers to automatically install.



After the drivers have been installed you should see a new Bluetooth icon appear in the system tray. Right click on this icon and click on the “Open Bluetooth Settings” and click on the COM Ports tab.

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You can also get here by clicking on the Bluetooth icon in the control panel.

Click [Add], make sure the Incoming radio button is selected and click [OK]. This will add a serial port that maps incoming Bluetooth requests that.

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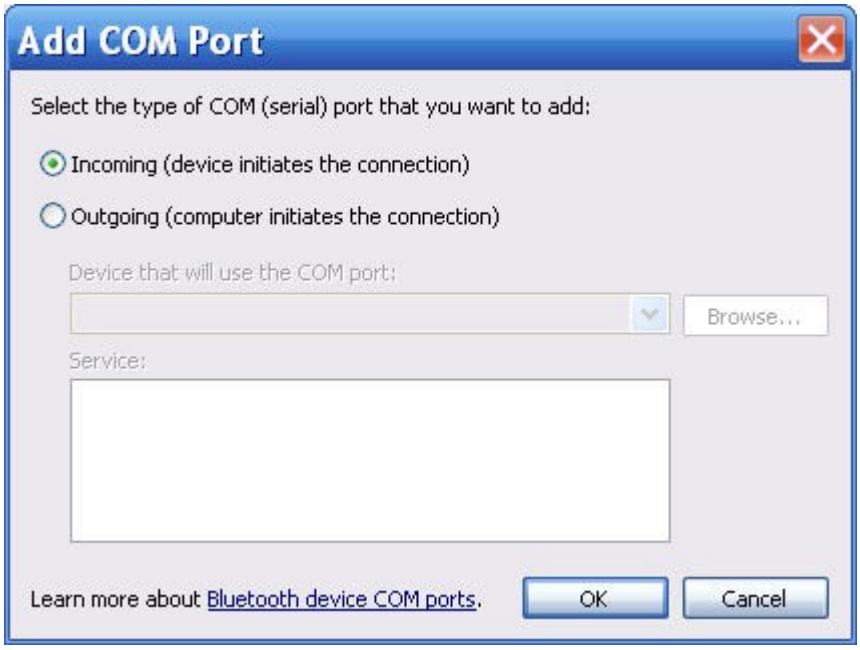
Add COM Port
Select the type of COM (serial) port that you want to add:
Incoming (device initiates the connection)
Outgoing (computer initiates the connection)
Device that will use the COM port:
Browse...
Service:
Learn more about Bluetooth device COM ports.
OK
Cancel

This will also appear in the Windows Device Manager as shown below.

While here, be sure to turn discovery on. In this environment, it is in the Bluetooth settings dialog under the Options tab.

We also recommend that you tick the “Show the Bluetooth icon in the notification area” checkbox.

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Bluetooth Devices
Devices
Options
COM Ports
Hardware
Discovery
To allow Bluetooth devices to find this computer, select the following check box.
Turn discovery on
To protect your privacy, turn on discovery only when you want a Bluetooth device to find this computer.
Connections
Use these settings to control whether a Bluetooth device can connect to this computer.
Allow Bluetooth devices to connect to this computer
Alert me when a new Bluetooth device wants to connect
Show the Bluetooth icon in the notification area
Learn more about Bluetooth settings.
Restore Defaults
OK
Cancel
Apply

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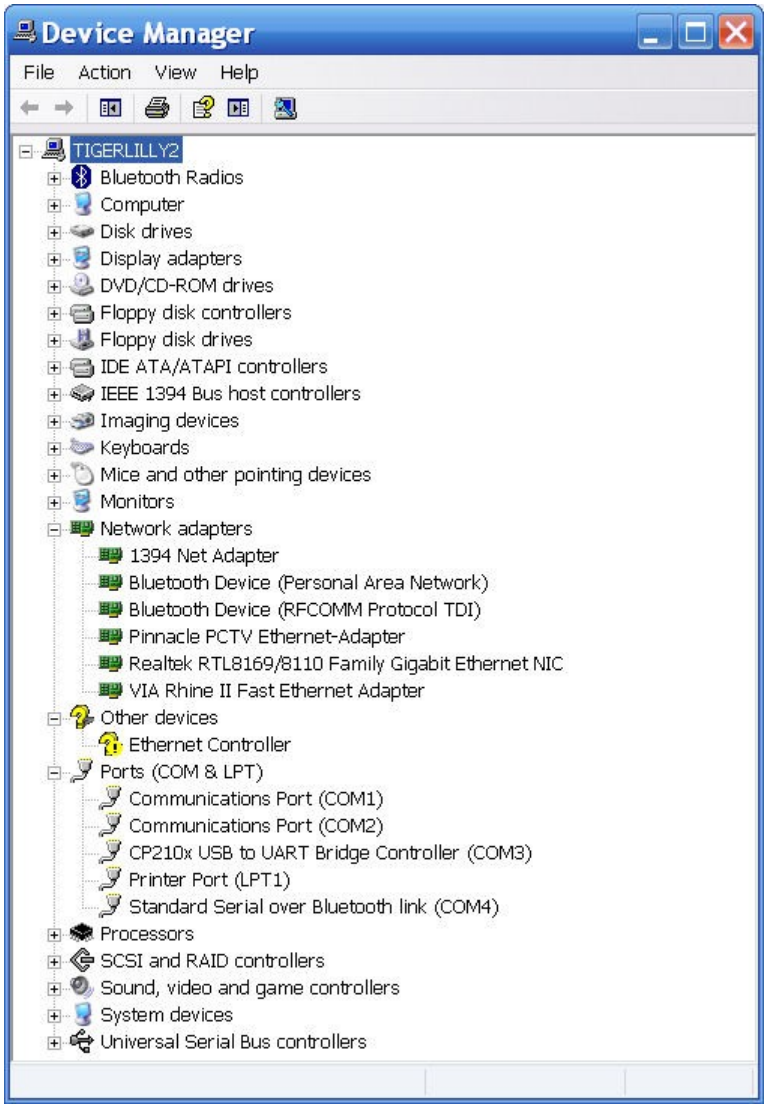

You can test this is working by going to the device and from the main menu select option 5 “Bluetooth” and then option 2 “Set Server”. This will search for Bluetooth devices within range and then will report the number of devices found. Press any key to display these devices.

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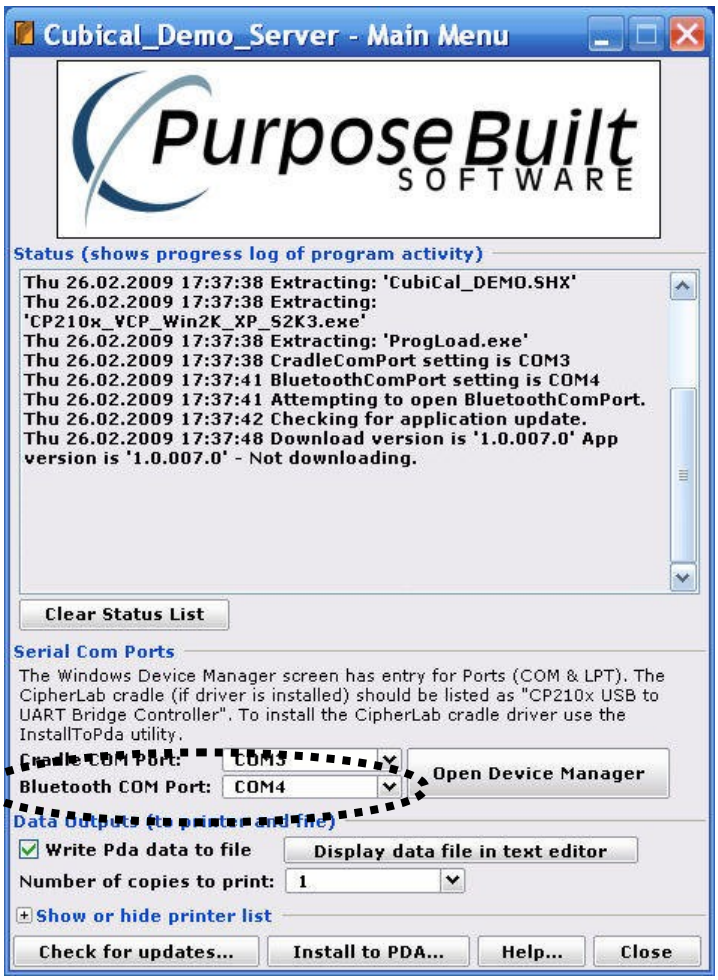
In this example it has found a 1. mobile phone (Nokia 6233), the 2. server computer (COMPUTERNAME) and the 3. Scales (Blue Weigh).


Cubical_Demo_Server - Main Menu
PurposeBuilt SOFTWARE
Status (shows progress log of program activity)
Thu 26.02.2009 17:37:38 Extracting: 'CubiCal_DEMO.SHX'
Thu 26.02.2009 17:37:38 Extracting:
'CP210x_VCP_Win2K_XP_S2K3.exe'
Thu 26.02.2009 17:37:38 Extracting: 'ProgLoad.exe'
Thu 26.02.2009 17:37:38 CradleComPort setting is COM3
Thu 26.02.2009 17:37:41 BluetoothComPort setting is COM4
Thu 26.02.2009 17:37:41 Attempting to open BluetoothComPort.
Thu 26.02.2009 17:37:42 Checking for application update.
Thu 26.02.2009 17:37:48 Download version is '1.0.007.0' App
version is '1.0.007.0' - Not downloading.
Clear Status List
Serial Com Ports
The Windows Device Manager screen has entry for Ports (COM & LPT). The CipherLab cradle (if driver is installed) should be listed as "CP210x USB to UART Bridge Controller". To install the CipherLab cradle driver use the InstallToPda utility.
Cradle COM Port: COM3
Bluetooth COM Port: COM4
Open Device Manager
Write Pda data to file
Display data file in text editor
Number of copies to print: 1
Show or hide printer list
Check for updates...
Install to PDA...
Help...
Close

4.6. Bluetooth Pairing

Bluetooth Pairing

The device needs to be pared with the server before Bluetooth can be used as the transmission method to upload data.

From the main menu, select 5 “Bluetooth”. Select 2. Set Server. This will search for network within range. Make sure that Discovery has been enabled in the Bluetooth settings on the server computer.

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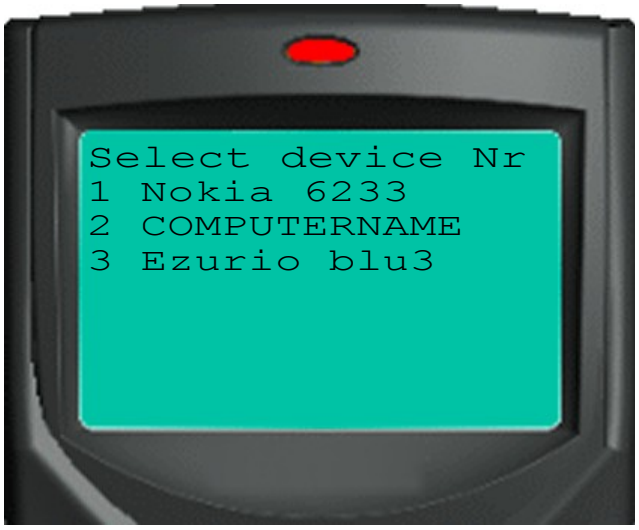
This will search for Bluetooth devices within range and can take up to 30 seconds. Once complete it report the number of Bluetooth devices found.

Press any key.



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On the server open up the Bluetooth options either by clicking on the icon in the system tray or via the control panel Bluetooth Devices.

Click on the Devices tab.

Click [Add]

Click the check box stating that your device is ready, then click [Next >]

Add Bluetooth Device Wizard
Select the Bluetooth device that you want to add.
If you don't see the device that you want to add, make sure that it is turned on. Follow the setup instructions that came with the device, and then click Search Again.
Search Again
< Back
Next >
Cancel

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Add Bluetooth Device Wizard
Select the Bluetooth device that you want to add.
Nokia 6210 Navigator
New device
Ezurio blu2i 970936
New device
8000EH8000200
New device
If you don't see the device that you want to add, make sure that it is turned on. Follow the setup instructions that came with the device, and then click Search Again.
Search Again
< Back
Next >
Cancel

Add Bluetooth Device Wizard
Do you need a passkey to add your device?
To answer this question, refer to the "Bluetooth" section of the documentation that came with your device. If the documentation specifies a passkey, use that one.
Choose a passkey for me
Use the passkey found in the documentation:
Let me choose my own passkey:
0000
Don't use a passkey
You should always use a passkey, unless your device does not support one. We recommend using a passkey that is 8 to 16 digits long. The longer the passkey, the more secure it will be.
< Back
Next >
Cancel

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Enter the pin on the device when prompted

Add Bluetooth Device Wizard
Completing the Add Bluetooth Device Wizard
The Bluetooth device was successfully connected to your computer. Your computer and the device can communicate whenever they are near each other.
To close this wizard, click Finish.
< Back
Finish
Cancel

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5. Sample Barcodes

You may find the following barcodes useful for demonstration purposes.

5.1. Sample Connotes and Airway Bill Numbers

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